



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Alcino Resende de ALMEIDA

Application No: 08/186,469

Group Art Unit: 3407

Filed: January 26, 1994

Examiner: K. Lee

For: SEAT FOR GATE VALVE

#14

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.115

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

In the Office Action of June 19, 1996, claim 2 was rejected under 35 U.S.C. §102 as being anticipated by Kelley et al. Claim 2 was further rejected under 35 U.S.C. §102 as being anticipated by Shaffer. Reconsideration and allowance of the application are respectfully requested in view of the following remarks.

The present invention is directed to a gas-lift valve for use in oil wells producing by continuance gas-lift. A gas-lift valve is so old and well known in the art that is not even necessary to set forth the use for the valve in the claim. Even though the claim refers to a valve seat, as pointed out previously, this does not in any way imply or suggest that there might be a valve member which engages the valve seat. One skilled in the art would immediately recognize that a gas-lift valve for use in oil wells producing by continuance gas-lift is provided with a continuously open passage through the valve seat. Thus, any prior art directed to conventional valves having a valve member which opens and closes the valve seat, are completely nonanalogous to the present invention. Thus the patents to Kelly et al. and Shaffer, which were



newly cited in the last Office Action, have absolutely nothing to do with the present invention and both are directed to solving technical problems different from the present invention.

In rejecting claim 2 as being anticipated by Kelley, it was stated that the patent to Kelley discloses a gas-lift valve including a valve seat (19) with a curved inlet portion, a smooth straight intermediate portion and a smooth outwardly tapered conical section. However, Figure 1 of Kelley clearly shows that the valve (19) is not part of the gas-lift device (17) but a part of the liquid-gas separator (11) connected to the tubing string (13). The patent contemplates an apparatus for automatically controlling the removing of the accumulation of fluid from gas wells by lifting slugs of liquid through the tubing string. If the liquid is not removed, the water level will rise or build up in the bore hole and in time will "kill" the well or stop the flow of gas completely. The apparatus of Kelley consists of a liquid-gas separator (11) connected to the lower portion of the tubing string (13) in which the liquid penetrates through openings (23) and the gas flows through the tubing (13) after passing through a ball check (27) included in the valve means (19). The smooth outwardly tapered conical section or valve seat (31) allows the valve member (28) connected by the rod (29) to move into the valve means (19) while the flotation effected is not destroyed by the weight of the liquid contained in the bucket (21). Thus the function of the valve means (19) is just to supply liquid to the tubing string. The geometry of the valve seat is designed according to the geometry of the valve member in Kelley et al. and there is absolutely no reason or suggestion within the patent to have the

geometry a venturi shape. Furthermore, the inlet and outlet passages for the valve of Kelley et al. appear to be conical on both sides of the straight portion, whereas claim 2 specifically calls for a curved inlet portion, a smooth straight intermediate portion and an outwardly tapered conical shaped outlet portion. Thus the patent to Kelley et al. is not even analogous to the present invention and clearly does not anticipate claim 2.

In rejecting claim 2 as being anticipated by Shaffer, it was stated that the patent to Shaffer discloses a valve (C20) used in an oil well to include a curved inlet section (22), a smooth intermediate section (21), and a smooth outwardly tapered conical section (23). In the first place, the inlet and outlet portions of Shaffer are both conical shaped and the inlet portion is not curved as specifically called for in claim 2. Furthermore, the objective of Shaffer is entirely different from the objective of the present invention. Shaffer discloses a device such as a flow nipple which can be actuated at the surface by operators, that is, actuated by hand, in order to "control" the flow in an oil line. The device allows the adjustment of the opening inside the nipple from completely open to completely closed by means of a valve rod (31) which is threaded for the reception of a conical valve member (36) which seats within the conical bore (23) of a tube (20) connected to the flow lines. The tube (20) is a central bore of uniform diameter throughout its length with the ends of the bore merging into conical bores (22,23) at the ends thereof of the same diameter as the flow lines. The purpose of Shaffer is to regulate the flow of a liquid, whereas in the present invention, the gas-lift valve

controls the flow of a liquid containing gas by using a venturi which leads to a reduction of pressure loss in the tubing. Thus, the patent to Shaffer is directed to an entirely different invention and even fails to have disclosed the same structure as the valve of the present invention. Therefore, it is not seen how Shaffer can possibly anticipate claim 2. In view of the foregoing arguments, it is respectfully requested that claim 2 be allowed and the Application passed to issue forthwith.

If for any reason the Examiner is unable to allow the Application on the next Office Action and feels that an interview would be helpful to resolve any remaining issue, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

Filed concurrently herewith is a petition and fee letter for a one month extension of time and a check in the amount of \$110.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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